

WHAT IS CLAIMED IS:

1. A diamond electrode for electrolysis comprising an electrode substrate, at least the surface of which comprises Magneli phase titanium oxide, and conductive diamond supported as an electrode catalyst on a surface of the electrode.

2. The diamond electrode as claimed in claim 1, wherein a volume ratio of the conductive diamond powder to the Magneli phase titanium oxide powder is from 1/20 to 20/1.

3. A diamond electrode for electrolysis comprising an electrode substrate, at least the surface of which comprises Magneli phase titanium oxide, and a mixture of a conductive diamond powder and a Magneli phase titanium oxide powder, supported as an electrode catalyst on a surface of the electrode.

4. The diamond electrode as claimed in claim 3, wherein a volume ratio of the conductive diamond powder to the Magneli phase titanium oxide powder is from 1/20 to 20/1.

5. A diamond electrode for electrolysis comprising an electrode substrate, at least the surface of which comprises Magneli phase titanium oxide, and conductive diamond supported as an electrode catalyst by a chemical vapor deposition method on a surface of the electrode.